CURRICULUM VITAE

PERSONAL INFO

NAME............................ : ELIAS
SURNAME....................... : SARAFIS
D.O.B ……………...... : 6th OCT. 1966
MARTIAL STATUS......... : MARRIED
HOME ADDRESS…............: PAFLAGONIAS 88
KAVALA, GREECE, 65404
TEL. (OFFICE) +30 2510 462230
(HOME) +30 2510 246772, (MOB.) +30 6940772979

EDUCATION

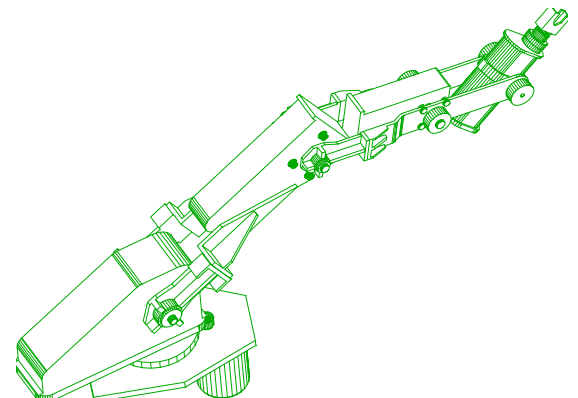1991-1994   University of Liverpool, UK.
Department of Electrical & Electronics Engineering

Ph.D. Thesis "Electrically Driven Underwater Manipulator for Remotely Operated Vehicles".
Funded by the EU "MAST" project, involving Universities and Industries from Greece, Germany, France, UK and Spain. The thesis presents the mechanical design and development and the automatic control of "POSEIDON I" robotic arm for underwater tasks. The automatic control was implemented on multiple parallel Transputers microprocessors and the arm was linked to a machine vision system for process automation (automatic retrieval of objects from the seabed, tools and equipment handling such as valves, cables etc.). The arm was tested both in vitro (measurement accuracy and response) and in actual underwater conditions. The final demonstration included the automatic retrieval of a cube from the bottom of a 10 m deep pool at the COMEX company in France.

1984-1990   Aristotles University of Thessalonica, GREECE
Mechanical Engineering Department

Physical & 3D Solid Model of Poseidon I Robotic Arm

LIST OF PUBLICATIONS

1   G.Maliaris, T.Lazaridis, I.Sarafis and S.Kavafaki, Indirect determination of the mechanical properties of stochastic lattices, 5th International Conference of Engineering Against Failure (ICEAF-V 2018), CHIOS, GREECE, MATEC Web Conf. Volume 188, 2018

2   G. Maliaris, E. Sarafis, "Mechanical Behavior of 3D Printed Stochastic Lattice Structures", Solid State Phenomena, Vol. 258, pp. 225-228, 2017

3   G.Maliaris, T. Rousakis, S. Rizogalas, T.Lazaridis, I. Sarafis, Mechanical response of retrofitting composite materials fabricated by means of additive manufacturing methods, Conference: The Twenty-fifth Annual International Conference on Composites/ Nano Engineering (ICCE-25), July 2017, Rome, ITALY

4   G Maliaris, I T Sarafis, T Lazaridis, A Varoutoglou and G Tsakataras, Random lattice structures. Modelling, manufacture and FEA of their mechanical response, 20th Innovative Manufacturing Engineering and Energy Conference (IManEE 2016) 23–25 September 2016, Kozani, Greece

5   T.Pachidis, I.Sarafis, J.Lygouras, "Real Time Feature Extraction and Standard Cutting Models Fitting in Grape Leaves". Computers and Electronics in Agriculture 2010 (Elsevier Int. Journal), 74 (2010) pp. 293–304.

6   T.Pachidis, I.Sarafis, J.Lygouras, "Vision System-based, Grape Leaves Processing, in Real Time". In Proc. 2010 IEEE International Conference on Imaging Systems and Techniques (IST 2010), July 2010, Thessaloniki, Greece

7   I.T.Sarafis, A.Markoulidis, "Modern Greek Language Frequency Counts for Text Entry Devices", In Proc. IADIS Interfaces and Human Computer Interaction 2010 (IHCI 2010) Conference, July 2010, Freiburg, Germany.

8   I.Sarafis, A.Markoulidis, "gpalm: A simplified accelerometer-based virtual keyboard", IADIS Interfaces and Human Computer Interaction 2009 (IHCI 2009) Conference, Algarve, Portugal, 17 – 23 June 2009.

9   P. Sotiropoulos, I. Sarafis, "Enforcing girls in acquiring skills on ICT and entrepreneurship scenarios by means of an asynchronous system of tele education". Proceedings of ICODL 2007, Athens, Greece 4th International Conference in Open and Distance Learning - Forms of Democracy in Education: Open Access and Distance Education.

10 I.Sarafis, J.Zezulak, "Computer analysis of slope failure and landslide processes caused by water", WIT Transactions on Ecology and the Environment, Vol.90, 2006 WIT Press, pp. 241- 250.

11 I.T.Sarafis, "Employment trends for engineers in Greece: a multidisciplinary survey", World Transactions on Engineering and Technology Education, Vol.2 N.1, 2003, pp. 61-64.

12 I.T.Sarafis, K.Tarchanidis, I.Lygouras, "Automation of Underwater Task using an Ellectrically Driven Manipulator", Proceeding of the IASTED international conference in Robotics and Automation, Aug. 2000, Honolulu, Hawaii, USA, p.24.

13 K.Tarchanidis, I.T.Sarafis, I.Lygouras, "Multisegment Snake-like Manipulator", Proceeding of the IASTED international conference in Robotics and Automation, Aug. 2000, Honolulu, Hawaii, USA, p.264.

14 I.Sarafis, A.Koutsou, L.Riley, "Technology for Productivity Monitoring and Unit Production Systems", The 78th World Conference of The Textile Institute (UK), Thessaloniki, Greece, 23-27 May 1997, II87-II94.

15 L.Riley, I.Sarafis, A.Koutsou, , "Link Up or Lose Out : Can a Company Survive Without EDI in the 21st Century?", The 78th World Conference of The Textile Institute (UK), Thessaloniki, Greece, 23-27 May 1997, I339-I351.

16 K.N.Tarchanidis,J.N.Lygouras,I.Sarafis, "A new Residual Vector for fast Converging Iterative Algorithm solving the Inverse Kinematics Problem", AMSE Conference, Brno, Chech Republic, 4th July 1995.

17 J.S.Smith, R.Yu, I.Sarafis, J.Lucas, "Computer Vision Control of an Underwater Manipulator", IEEE Oceans '94, Brest, France, 13-16 Sept.1994, I187-I192.

Citations:

1 J.Horgan & D.Toal, "Review of Machine Vision Applications in Unmanned Underwater Vehicles" in.proc. IEEE ICARCV 2006, Dec 2006, Singapore

2 Yann, E., Nose, Y., Ura, T., "Autonomous underwater sampling using a manipulator and stereovisual servoing", Oceans 2005 - Europe, On page(s): 731 - 736 Vol. 2, Volume: 2 Issue: , 20-23 June 2005

3 A.Huster, "Relative position sensing by fusing monocular vision and inertial rate sensors", Ph.D. Thesis, Stanford University, July 2003.

4 A.Grau, J.Climent and J.Aranda, "Real-time architecture for cable tracking using texture descriptors", in proc. IEEE Oceans 1998, pp. 1496 - 1500 vol.3.

5 R.S. CAUSEY, "A LATERAL VISION-BASED CONTROL AUTOPILOT FOR MICRO AIR VEHICLES USING A HORIZON DETECTION APPROACH", Ph.D. Thesis, UNIVERSITY OF FLORIDA, 2003

6 M.J. Tsai, M. Zahid, J.S. Smith, J. Lucas, "A two-dimensional vision system with optical ranging capability", Optics & Laser Technology, Volume 29, Issue 5, July 1997, Pages 239–247

Innovations in Manufacturing:
1 "Centrifugal Casting of Rollers from White Cast Iron with Surface Enhancement of Tungsten Carbide" at the Kambakas – GMC foundry.

Reports within "MAST" frames :
1 I.Sarafis, J.Smith, "Task 3: POSEIDON I Underwater Manipulator", MAST 0030C Final Report, The University of Liverpool, UK, 1993.

2 I.Sarafis, R.Yu, "Demonstration of Automatic Object Recovery using Manipulator-Vision linking", MAST 0030C meeting, Marseille, France, October 1993.

3 I.Sarafis,Y.Esteve, "Implementation and demonstration of the POSEIDON I underwater manipulator", MAST 0030C meeting, Liverpool, UK, September 1993.

4 I.Sarafis, "Task 3 : Manipulator Control", MAST 0030C Progress Report No5, The University of Liverpool, UK, 1993.

5 I.Sarafis, "Demonstration of Arm Design", MAST 0030C meeting, Liverpool, UK, March 1993.

6 I.Sarafis, "Task 3 : Manipulator Design", MAST 0030C Progress Report No4, The University Of Liverpool, Uk, 1992.

PROFESSIONAL EXPERIENCE

Duration	Position
Oct.12 – today	**Technological Educational Institute of Eastern Macedonia - Thrace (TEI-EMTH).** **Dean – School of Technology Applications.** Professor, Mechanical Engineering Department, in "Informatics in Mechanical Systems" http://www.teikav.edu.gr/ , http://hephaestus.teikav.edu.gr/ & http://hephaestus.teikav.edu.gr/index.php/ct-menu-item-6
Mar.99 – Sep.12	**TEI-EMTH.** Assistant & Ascociate Professor, Mechanical Engineering Department
Nov. 17 -	**TEI-EMTH, Nationaly Funded Project «**Multi-Layered Fire Retardant Polypropylene Pipe - FIREBLOCK» Company: INTERPLAST. **Project Manager** of the subcontracting part on behalf of TEI. Total budget 350.000€. Subcontracting budget for TEI 90.000€.
Feb. 18 -	**TEI-EMTH, Nationaly Funded Project «**Automation of the Optical Screening of Marble Tiles - OPTIMAR» Companies: INTEPMEK & TSOLAKIS Marbles. **Project Manager** of the subcontracting part on behalf of TEI. Total budget 270.000€. Subcontracting budget for TEI 80.000€.
Feb. 18 -	**TEI-EMTH, Nationaly Funded Project «**A Thermal Storage Pilot Plant using Bio-based Phase Changing Materials - BIOPCM» Companies: VERTECO & ECOENERGIA. **Project Manager** of the subcontracting part on behalf of TEI. Total budget 350.000€. Subcontracting budget for TEI 190.000€.
Jun. 14 – Nov. 15	**TEI-EMTH, Nationaly Funded Project , General Secretary for R&D, "Greece-Israel Joint R&D Projects", with title " Space Lattice Structures for Lightweight Machine Tool Parts",** in cooperation with companies. Total budget 400.000€, budget for TEI 296.000€. **Project Scientific Responsible.**
Apr.11 – Dec. 14	**TEI-EMTH, Nationaly Funded Project "Virtual Mechanical Laboratories".** Budget 416.000€. **Project Manager.**
Dec. 05 – May 08	**TEI-EMTH, Nationaly Funded Project "Vocational Training of Students in ICT and Entrepreneurship"** . Budget 1.670.000€. **Project Manager.**
Apr.03 – Aug. 08	**TEI-EMTH, Nationaly Funded Project "Undergraduate Curriculum Improvement".** Team Member.
Jul. 06 – Dec. 07	**Center of Technological Research of E.Macedonia – Thrace, Nationaly Funded Project "Centrifugal Casting of Metal Matrix Composites".** Budget (total) 236.717,00€. Budget (CTR) 42.852,00€. **Project Manager.**
Jan.05 – Dec. 07	**TEI-EMTH, Nationaly Funded Project "Modeling and Control of Electrical Machines".** Team Member.
Oct.05 – May 07	**TEI-EMTH, Nationaly Funded Project "Cooperation Between Drama – Smolyan with Modern Technologies".** Team Member.
June 06 – Nov. 07	**TEI-EMTH, EU Funded Project "Integrated Development & Management of Natura 2000 Areas Through Innovative Techniques".** Team Member.
Jan.02 – Dec. 07	**TEI-EMTH, National Funded Project "Educational Support for Networking Activities". Project Manager**
Oct.01 – May 02	**TEI-EMTH, "Software for Drivers Education".** Responsible for the development of a multimedia e-learning application in Visual Basic, for the theoretical teaching of car drivers.
Dec.99 – Aug.01	**TEI-EMTH, National Funded Project "Automation of a system for metal surface treatment ".** Team Member.
Jan.98 – June 98	**Democritus University, EU Funded Project "Vision based high speed cutting of complex shapes".** Team Member responsible for motion control software development.

Duration	Position
Nov.97 – Mar.99	**TEI-EMTH,** Networks Engineer (Internet), in charge of installation and operation of TEI-EMTH Intarnet
Jan.96 – Oct.97	**Polytropon Ltd.,**. Automation Systems, R&D Engineer . In charge of Macintosh C programming for the serial control of external devices (digitizers, plotters).
Jan. 95 – Apr. 96	**2nd Army Corps.** Military Service. In charge of Information Systems
Nov.91 – Dec.93	**EUFunded Project "MAST".** PhD Thesis.
Nov.90 – June 91	**MAHO AG. CNC Tool Machines, Germany.** Worked in Standarisation Department and in CAD Design.

ACTIVITIES AS A MEMBER OF STAFF

1. **Teaching**
   1.1. "Managing Systems Implementation" in "MSc in Finance & Financial Information Systems", TEI-EMTH
   1.2. "Internet and Communications" in "MSc N-E Europe Studies", Democritus University
   1.3. "Information Systems", "Computer Networks", "Thermodynamics", as visiting Professor in Democritus University
   1.4. "Robotics", "CAD", "Automatic Controls Laboratory", "Internal Combustion Engines", "Computer Integrated Manufacturing", "Tool Machines" in TEI-EMTH, Mechanical Engineering Department

2. **Teaching Notes & Books**
   2.1. Book "Technical Drawing with AUTOCAD"
   2.2. Teaching Notes for "Mechanical Constructions using Computers"
   2.3. Laboratory Exercises for "Industrial Control"

3. **Managerial Positions**
   3.1. Head of Mechanical Engineering Department 2011-12
   3.2. Head of Sector "Constructions – Installations – Production" in Mechanical Engineering Department, 2005-06, 2006-07, 2007-08, 2008-09
   3.3. President of TEI-EMTH Technical Board, 2004 to 2009
   3.4. Head of Sector "Design – Production and Marketing of New Products of the Center of Technological Research of E.Macedonia – Thrace, 2004 to 2009

EXTRA-CURRICULUM ACTIVITIES

1995 :   Award by 2nd Army Corps Commander General for the development of a multimedia system for the presentation of "FILIPPOS 95" military exercise.

1991-93 :   President & Vice President of "the Hellenic Society, The University of Liverpool"

1988,89 :   Member of "The Young European Federalists (JEF)", member of the editorial team.